USMC LAV Modernization Plan

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Purpose

- **Provide overview of USMC LAV modernization plans**
  - LAV SLEP Status
  - Funded Programs
    - LAV-C2 Upgrade
    - LAV-25 Lethality Upgrade
    - OIF Upgrades
    - Five New Companies
  - Future LAV Programs
    - Survivability Upgrades
    - LAV-Anti-Armor System
    - LAV-EFSS (Expeditionary Fire Support System)

From C.G., MARCORSYSCOM

- **For the next 20 years USMC combat vehicle fleet will be**
  - AAV/EFV
  - LAV
  - M1A1 Tank
- **Focus: Evolutionary upgrades to ensure**
  - Combat effectiveness
  - Supportability
- **Most important future upgrade: Active Protection**
  - Threshold – RPGs
  - Objective – ATGMs
  - Growth potential for KE defeat

Mission of the LAR Battalion

- **To conduct reconnaissance, security, and economy-of-force operations and, within capabilities, conduct limited offensive or delaying operations that exploit the unit's mobility and firepower**
  - Conduct reconnaissance for the GCE or Marine Air Ground Task Force (MAGTF) Commander in the close and deep battle space
  - Conduct security operations to protect the GCE or MAGTF
  - Win the counter-reconnaissance fight
  - Exploit opportunities with long range firepower and mobility

LAV SLEP Status

- **Improve survivability, sustainability and lethality - extend service life to 2015**
  - Basic SLEP
    - Electrical/electronic upgrades
    - Control panel upgrades
    - Corrosion control upgrades
    - Tire/wheel replacement
    - Thermal signature reduction
    - Prime contractors: Metric Systems, Hutchinson Industries
    - Milestone III decision/production award: Apr 02
    - IOC: 2Q FY04
    - FOC: 1Q FY06

LAV SLEP Status (Cont)

- Improved Thermal Sight System
  - Second Generation thermal sight
  - Laser rangefinder
  - Fire control system
  - Far Target Location
  - Prime contractor: Raytheon
  - EMD contract award May 02
  - FRP milestone/award production option 4QFY 05
  - IOC: 1Q FY07
  - FOC: 1Q FY10

Funded Programs
LAV Command & Control (LAV-C2) Upgrade

Funded Programs
LAV Command & Control (LAV-C2) Upgrade

- **LAV-C2 Upgrade will provide**
  - Ability to operate
    - MAGTF digital C4I systems
    - Doctrinal voice command and control nets
    - for a separate battalion in a Marine Division
    - on-the-move
  - SATCOM on-the-move
  - Dependable HF on-the-move
  - Intercommunications system
  - “Hooks” for JTRS

Funded Programs
LAV-C2 Acquisition Strategy

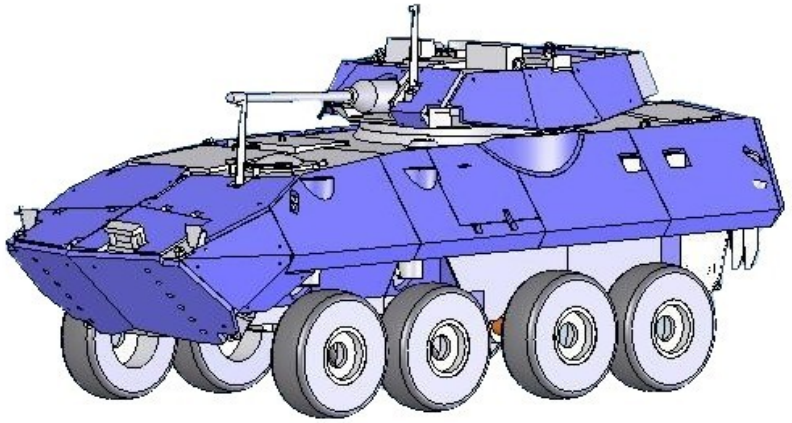
- **Strategy: Upgrade 50 LAV-C2s by integrating existing radios and non-developmental digital C4I system.**
  - Commonality with EFV C2
    - Multi-Processor Unit (MPU)/Mass Memory Unit (MMU)
    - Intercom System
  - Common Hardware Suite workstations
- **Two competing contractors for System Integration**
  - Northrop Grumman
  - Lockheed Martin
- **Downselect to one for System Demonstration and Production**
- **System Development and Demonstration FY05-07**
- **Production and Deployment FY07-11**
- **FY09: IOC**
- **FY11: FOC**

Funded Programs
LAV-25 Lethality Upgrade

- **LAV-25 Lethality Program will provide**
  - Depleted uranium armor piercing round for LAV-25
    - Software upgrade to ITSS for D/U ballistics
    - Gun and recoil system upgrades to handle D/U round
    - Ammo, gun upgrades are already fielded for Bradley
    - Allows LAV-25 to penetrate more threat vehicles
    - USMC will continue to employ the current 25mm APDS-T round, but will obtain the flexibility to fire D/U when required to defeat more advanced threat vehicles
- **Schedule**
  - Design updates FY07
  - IOC FY08
  - FOC FY10

Funded Programs
OIF Upgrades

- **LAV OIF Upgrades**
  - Automatic Fire Suppression
  - Add-on Armor
  - 2nd Generation Suspe
  - Electric Turret Drive
- **Contractors**
  - Kidde Dual Spectrum
  - ARMATEC
  - GDLS



Funded Programs
Five New Companies

- **Five New Companies**
  - USMC approved LAR structure increase of five companies
  - 120 new LAVs
    - Incorporate SLEP Upgrades
    - Incorporate OIF Upgrades
  - Prime Contractor: GDLS

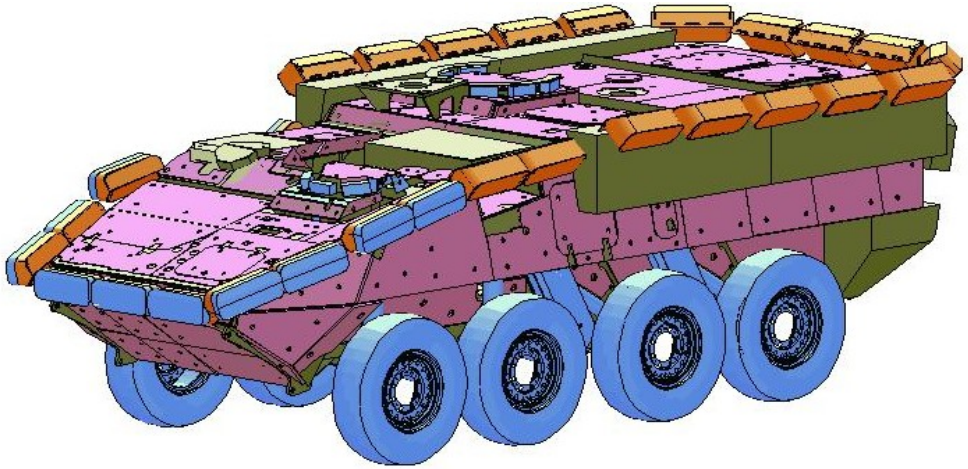
The Future of LAV?

- **USMC LAV projected to remain in service until replaced by MAGTF Expeditionary Family of Fighting Vehicles (MEFFV) in 2024.**
- **LAV family of vehicles must remain**
  - Effective in the face of increasing threat capabilities
  - Supportable in the face of increasing age

Future Programs
Survivability Upgrades

Mine Protection

Active Protection



Future Programs
Survivability Upgrades

- **LAV Survivability Upgrades will provide**
  - Mine Protection
    - Protected seats
    - Hull/deck reinforcement
  - Active Protection System
    - Close-in hand held rockets
    - ATGM
    - “B” kit developed as HTI Program by PM MEFFV
    - “A” kit developed by PM, LAV
- **System Development and Demonstration 3 years**
- **Production and Deployment 4 years**
- **POM 08 initiative**

Future Programs
LAV Advanced Anti-Tank System (LAV-AAS)

Future Programs
LAV Advanced Anti-Tank System (LAV-AAS)

- **LAV-AT deficiencies**
  - Excessive firing cycle time that leaves crew vulnerable for up to two minutes while firing
  - Excessive corrosion due to design imperfections
  - Decreasing readiness rates due to corrosion and inadequate supply support
  - Increasing maintenance costs
  - Low confidence rate for LAV-AT among MEU and LAR Bn Cdrs

Future Programs
LAV-AAS Acquisition Strategy

- **Strategy: Replace 95 Emerson 901A1 turrets with LAV-25 “Saddlebag TOW” turrets**
- **System Development and Demonstration 3 years**
- **Production and Deployment 4 years**
- **Un-funded in POM ’06 – Recompete for POM ‘08**

Future Programs

LAV Expeditionary Fire Support System (EFSS)

Future Programs
LAV EFSS Acquisition Strategy

- **Strategy: Replace 50 LAV mortars by integrating 120 mm rifled mortar and fire control system into existing LAV-M platforms.**
- **System Development and Demonstration 3 years**
- **Production and Deployment 4 years**
- **Un-funded in POM ’06 – Recompete POM ‘08**

Future Programs

- **The challenge: How much survivability, lethality and mobility can be packed into an air-transportable, swim-capable LAV?**